

ACCT 548: IT AUDIT AND DATA APPLICATIONS

Fall 2019 + 80 minute Friday Labs

3 units

Instructor	Thomas Phelps IV
Class Schedule:	Tue/Thu: 6:30-7:50 PM (ACC 303) Friday Lab: 8-9:20 AM (HOH 1)
Office:	ACC 214
Office Hours:	Thu: 5:20-6:20 PM or by appointment
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Course Description

This course has been designed to provide graduate level accounting students with an overview of the implications of technology on financial statement audits—including IT general computer controls, application controls, risk assessment, substantive audit evidence—and deepening an auditor’s understanding of the underlying transactions using leading industry tools employed by large professional services firms. Because this is a graduate course, there is a fair amount of reading from the textbook and participation in a lab environment will be required. Additionally, a co-requisite will be ACCT 541, Enhanced Auditing in the Data Age.

Learning Objectives

Upon completion of this course, students should be able to:

1. Describe industry guidance (e.g., AICPA) for auditing and using data analytics
2. Describe the IT general computer control environment and relevant controls
3. Identify and evaluate application controls relevant to financial reporting
4. Explain audit concepts including, but not limited to, integrity of data inputs, data security, data privacy, and data quality (completeness, accuracy, availability, etc.)
5. Describe how auditors collect, prepare, analyze, use and communicate data as audit evidence
6. Apply audit procedures using industry-leading tools to case studies and exercises
7. Analyze results of audit procedures to determine risks to an organization’s internal control structure and the ramifications to the financial statements
8. Create audit documentation to record evidence of procedures performed
9. Describe current issues in the IT industry and the potential future impact to the industry and profession

Required Materials

The required reading materials for the course is the following and is available in the USC bookstore:

- Hall, James, A., (2016). Information Technology Auditing. Cengage

Publishing (ISBN 978-1-133-94988-6)

Available on the Internet:

- Sarbanes Oxley Act – Available at <https://www.congress.gov/bill/107th-congress/house-bill/3763>
- AICPA: <https://www.aicpa.org/research/standards/auditattest.html>
 - Statements on Auditing Standards (SAS or AU-C)
 - Audit Considerations Relating to an Entity Using a Service Organization - <https://www.aicpa.org/content/dam/aicpa/research/standards/auditattest/downloadabledocuments/au-c-00402.pdf>
 - Reporting on an Examination of Controls at a Service Organization Relevant to User Entities' Internal Control Over Financial Reporting - <https://www.aicpa.org/content/dam/aicpa/research/standards/auditattest/downloadabledocuments/at-c-00320.pdf>
 - Audit Data Analytics Website – <https://www.aicpa.org/interestareas/frc/assuranceadvisoryservices/auditanalytics.html>
 - Data Analytics Guide - <https://www.aicpa.org/interestareas/frc/assuranceadvisoryservices/pages/auditdataanalyticsguide.aspx>
 - Segregation of Duties - <https://www.aicpa.org/interestareas/informationtechnology/resources/value-strategy-through-segregation-of-duties.html>
- SEC Filings: <https://www.sec.gov/edgar/searchedgar/webusers.htm>
- Institute of Internal Auditors – North America:
 - <https://na.theiia.org/>
 - COSO Internal Control – Integrated Framework – Executive Summary - https://na.theiia.org/standards-guidance/topics/Documents/Executive_Summary.pdf

Course Notes:

Links to additional readings will be posted on Blackboard. It is your responsibility to ensure you check Blackboard frequently throughout the course to ensure you are aware of all necessary reading assignments.

You will need access to a computer (either PC or Mac, although PC is preferred) to complete the exercises and group projects in this course.

Grading Policies:

Final grades represent how you perform in the class relative to other students. Your grade will not be based on a mandated target, but on your performance. Historically, the average grade for this class is about a 3.3, but may vary based on class performance. Three items are considered when assigning final grades:

1. Your average weighted score as a percentage of the available points for all assignments (the points you receive divided by the number of points possible).
2. The overall average percentage score within the class.
3. Your ranking among all students in the class.

Grades will be based on the following:

<u>Assignments</u>	<u># of Points</u>	<u>% of Overall Grade</u>
Mid-Term Examination	250	25%
Final Examination	250	25%
Case Studies (5 Total)		
Case #1: Flowcharting	70	7%
Case #2: KAAP	70	7%
Case #3: IDEA	70	7%
Case #4: Hydrus, Inc.	70	7%
Case #5: Tableau – Data Visualization	70	7%
IDEA Homework Exercises (2)	50	5%
Class Contribution	100	10%
TOTAL	1,000	100%

Assignment Submission

Assignments must be turned in on the due date/time electronically via Blackboard. Any assignment turned in late, even if by only a few minutes, will receive a grade deduction (for example, if your work is a B+ grade, you will be given a C+ grade). If your internet breaks down on the due date, you must deliver a hard copy at the beginning of class on that day. If you are unable to attend class on that day, make arrangements for it to be delivered to the classroom by the start of class. Late or not, however, you must complete all required assignments to pass this course.

Exams

Exams may include: multiple-choice questions, short answer / brief essay questions, exercises, and problems. Preparing for exams involves dedication and ends only when you can: 1) identify the relevant issues in a given business situation; 2) analyze the data and transform it into information to be used in a comprehensive answer; and 3) explain what you did using techniques demonstrated in class. The best bet for success involves a number of steps. First, is making sure you do the advanced preparation for each class session. Second is reworking problems done in class and trying other additional problems. Third is making sure you ask questions in a real-time manner to solidify your understanding of the material as we go, rather than trying to 'get it' right before an exam.

Remember, on exams you will be required to perform all work (e.g., problem setup, solution generation, and answer presentation) on your own.

During the semester, each exam will be returned as soon as possible after it has been given. After each test is returned, you will have one week to discuss your grade. After this time, grades on tests become final. All other grades are final once given.

The Leventhal School of Accounting policy states that exams should not be missed unless there is a very serious emergency AND it can be properly documented. Also, to the extent possible, you must inform the instructor of the emergency prior to the exam (it is understood this is not always possible). If you miss an exam for something other than a serious emergency and / or you cannot provide documentation, you will receive a zero grade for the exam. If there is a serious emergency, you can provide proper documentation and (when possible) have notified me before the exam, a substitute grade will be calculated based on the normalized average of your other exam(s). There will be no make-up exams.

The final exam must be taken at the scheduled time unless an incomplete contract has previously been approved per Leventhal School of Accounting guidelines.

Case Studies

Five (5) case studies and associated questions relating to the case will be handed out during the course. The questions for the case are meant to test your understanding of the course material, as well as applying this material to information stated within the case. The answers to your questions should be thorough and demonstrate a reasonable consideration of the case issues. These answers will be collected prior to our discussion of the case. Answers that are superficial and only demonstrate a topical understanding of the course or case material will be considered unsatisfactory and graded accordingly.

Lab Projects

Lab projects and exercises will be introduced throughout the course. These projects will test the student's ability to apply what we learned in class using the technology and tools used by industry leading firms. These projects will be completed either during the lab sessions for the course or if necessary, completed externally by the students. More information for the lab projects will be provided throughout the course.

Class Contribution

Class contribution points are awarded for being engaged and involved in the classroom discussion. Points are not awarded for merely attending class. Instead, an assessment will be made on how much each student contributed positively to the classroom experience.

Homework Exercises

There will be two homework projects relating to learning how to use the IDEA data analytics software. These homework assignments will include completing two significant work book tasks relating to an Accounts Receivable Audit and an Accounts Payable Audit and Fraud Investigation. More information will be provided about these assignments during the semester.

ADDITIONAL INFORMATION

Retention of Graded Coursework

Final exams and all other graded work which affected the course grade will be retained for one year after the end of the course *if* the graded work has not been returned to the student. If I returned a graded paper to you, it is your responsibility to file it.

Technology Policy

Laptop and Internet usage is not permitted during academic or professional sessions unless otherwise stated by the respective professor and/or staff. Use of other personal communication devices during academic or professional sessions is considered unprofessional and is not permitted. ANY e-devices (cell phones, iPads, other texting devices, laptops, I-pods) must be completely turned off during class time. Upon request, you must comply and put your device on the table in off mode and FACE DOWN. You might also be asked to deposit your devices in a designated area in the classroom. Videotaping faculty lectures is not permitted due to copyright infringement regulations. Audiotaping may be permitted if approved by the professor. Use of any recorded or distributed material is reserved exclusively for the USC students registered in this class. Exceptions to this policy may be granted to individual students with appropriate documentation on a case-by-case basis.

Recordings

No student may record any lecture, class discussion or meeting with the professor without the professor's prior express written permission. The word "record" or the act of recording includes, but is not limited to, any and all means by which sound or visual images can be stored, duplicated or retransmitted whether by an electro-mechanical, analog, digital, wire, electronic or other device or any other means of signal encoding. The professor reserves all rights, including copyright, to lectures, course syllabi and related materials, including summaries, PowerPoints, prior exams, answer keys, and all supplementary course materials available to the students enrolled in this class whether posted on Blackboard or otherwise. They may not be reproduced, distributed, copied, or disseminated in any media or in any form, including but not limited to all course note-sharing websites. Exceptions are made for students who have made prior arrangements with DSP and the professor.

USC Statement on Academic Conduct and Support Systems

Academic Conduct:

Students enrolled in any class offered by the Leventhal School of Accounting are expected to uphold and adhere to the standards of academic integrity established by the Leventhal School of Accounting Student Honor Code. Students are responsible for obtaining, reading, and understanding the Honor Code System handbook. Students who are found to have violated the Code will be subject to disciplinary action as described in the handbook. For more specific information, please refer to the Student Honor Code System handbook, available in class or from the receptionist in ACC 101.

Support Systems

Student Health Counseling Services - (213) 740-7711 – 24/7 on call
engemannshc.usc.edu/counseling

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention.

National Suicide Prevention Lifeline - 1 (800) 273-8255 – 24/7 on call
suicidepreventionlifeline.org

Free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week.

Relationship and Sexual Violence Prevention Services (RSVP) - (213) 740-4900 – 24/7 on call
engemannshc.usc.edu/rsvp

Free and confidential therapy services, workshops, and training for situations related to gender-based harm.

Office of Equity and Diversity (OED) | Title IX - (213) 740-5086
equity.usc.edu, titleix.usc.edu

Information about how to get help or help a survivor of harassment or discrimination, rights of protected classes, reporting options, and additional resources for students, faculty, staff, visitors, and applicants. The university prohibits discrimination or harassment based on the following protected characteristics: race, color, national origin, ancestry, religion, sex, gender, gender identity, gender expression, sexual orientation, age, physical disability, medical condition, mental disability, marital status, pregnancy, veteran status, genetic information, and any other characteristic which may be specified in applicable laws and governmental regulations.

Bias Assessment Response and Support - (213) 740-2421
studentaffairs.usc.edu/bias-assessment-response-support

Avenue to report incidents of bias, hate crimes, and microaggressions for appropriate investigation and response.

The Office of Disability Services and Programs - (213) 740-0776
dsp.usc.edu

Support and accommodations for students with disabilities. Services include assistance in providing readers/notetakers/interpreters, special accommodations for test taking needs, assistance with architectural barriers, assistive technology, and support for individual needs.

USC Support and Advocacy - (213) 821-4710
studentaffairs.usc.edu/sssa

Assists students and families in resolving complex personal, financial, and academic issues adversely affecting their success as a student.

Diversity at USC - (213) 740-2101
diversity.usc.edu

Information on events, programs and training, the Provost's Diversity and Inclusion Council, Diversity Liaisons for each academic school, chronology, participation, and various resources for students.

USC Emergency - UPC: (213) 740-4321, HSC: (323) 442-1000 – 24/7 on call
dps.usc.edu, emergency.usc.edu

Emergency assistance and avenue to report a crime. Latest updates regarding safety, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible.

USC Department of Public Safety - UPC: (213) 740-6000, HSC: (323) 442-120 – 24/7 on call
dps.usc.edu

Non-emergency assistance or information.

Students with Disabilities

USC is committed to making reasonable accommodations to assist individuals with disabilities in reaching their academic potential. If you have a disability which may impact your performance, attendance, or grades in this course and require accommodations, you must first register with the Office of Disability Services and Programs (www.usc.edu/disability). DSP provides certification for students with disabilities and helps arrange the relevant accommodations. Any student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to me (or to your TA) as early in the semester as possible. DSP is located in GFS (Grace Ford Salvatori Hall) 120 and is open 8:30 a.m.–5:00 p.m., Monday through Friday. The phone number for DSP is (213) 740-0776. Email: ability@usc.edu.

Emergency Preparedness/Course Continuity

In case of a declared emergency if travel to campus is not feasible, the *USC Emergency Information* web site (<http://emergency.usc.edu/>) will provide safety and other information, including electronic means by which instructors will conduct class using a combination of USC's Blackboard learning management system (blackboard.usc.edu), teleconferencing, and other technologies.

COURSE CALENDAR

Class #	Date	Topic/Activity	Class Preparation Activities <i>Read Book: IT Auditing; Hall, 4th Edition</i> <i>R: Review Questions;</i> <i>D: Discussion Questions;</i> <i>P: Problems</i>
1	8/27/19	Class Introduction	Read Syllabus
2	8/29/19	Financial Statement Audits & IT Control Considerations	Hall – Ch. 1 R: 10-12, 13, 17, 18, 21, 25; D: 12, 13; P: 1 Read Sarbanes Oxley Act – Sections 302, 404, 906 (See course materials section of syllabus for the link.)
Lab #1	8/30/19	No Lab	
3	9/3/19	IT Governance & IT Control Implications	Hall – Ch. 2 R: 1, 2, 7, 15, 18-21; D: 1, 3, 11, 12, 13, 19, 24; P: 5 Review AICPA website regarding standards about service organizations (Sections AU-C 402, AT-C 320)
4	9/5/19	IT General Controls (ITGCs) Introduction & Security (OS & Network)	Hall – Ch. 3 R: 3, 7, 12, 23; D: 10, 11; P: 2, 3, 9
Lab #2	9/6/19	Orientation to Lab, Industry and Firm Audit Tools	
5	9/10/19	No Class (ISACA Career Night)	
6	9/12/19	ITGCs Continued – System Development Life Cycle	Hall – Ch. 5 R: 1, 2, 3, 5, 11, 25, 29; D: 6, 7, 8, 12, 18; P: 9, 11
Lab #3	9/13/19	No Lab – PacWest Planning (Meet at 8 AM)	
7	9/17/19	Transaction Processing and Financial Reporting Systems	Hall – Ch. 6 R: 2, 10, 16, 20, 22-23, 39; D: 7, 14, 17
8	9/19/19	Documentation of System Processing; Case #1 – Flowcharting Intro and Group Discussion	Hall – Ch. 6 P: 8, 10, 12
Lab #4	9/20/19	PacWest Site Visit	
9	9/24/19	Computer-Assisted Audit Tools and Techniques	Hall – Ch. 7 R: 1, 4, 5, 10; D: 1-6; P: 1
10	9/26/19	Midterm Review; Case #1 Due	

Lab #5	9/27/19	KAAP Cloud Exercises – Deep Dive with KPMG*	Demo of KAAP; Review Tucana
11	10/1/19	Audit Applications of KAAP Class Discussion; Review Case #2 – KAAP	
12	10/3/19	MIDTERM	
Lab #6	10/4/19	No Lab – GUESS Planning Meeting	
13	10/8/19	Introduction to Databases and Auditing Databases	Hall – Ch. 4 R: 1, 2, 5, 9, 13; D: 8, 17
14	10/10/19	Auditing Revenue Cycle	Hall – Ch. 9 R: 2, 3, 4, 10-12, 16; D: 1, 3, 4; P: 1
Lab #7	10/11/19	No Lab – GUESS Site Visit	
15	10/15/19	Auditing Expenditure Cycle; (Case #2 Due)	Hall – Ch. 10 R: 1, 3, 6, 8, 15; D: 2, 4; P: 4, 9
16	10/17/19	No Class – USC Fall Recess	
Lab #8	10/18/19	No Lab – USC Fall Recess	
17	10/22/19	Guest Speaker – Practical Applications of Data Analytics in Business*	
18	10/24/19	Guest Speaker – Using Alteryx in Audits*	
Lab #9	10/25/19	Introduction to IDEA; Case #3 Introduction & Group Discussion	
19	10/29/19	IDEA – A/R Audit	Review IDEA Workbook Section #2
20	10/31/19	IDEA – A/P Audit and Fraud Investigation	Review IDEA Workbook Section #3
Lab #10	11/1/19	IDEA Lab Work	
21	11/5/19	Case #4 Hydrus, Inc. KAAP Introduction (Case #3 Due)	
22	11/7/19	Hydrus Group Work – No Class	
Lab #11	11/8/19	No Lab – CHLA Site Visit	
23	11/12/19	Ethics, Fraud Schemes and Fraud Detection	Hall – Ch. 12 R:17, 18, 22, 25, 28; D: 5, 20, 25, 32, 34
24	11/14/19	Ethics, Fraud Schemes and Fraud Detection (continued)	

Lab #12	11/15/19	Hydrus Lab Work	
25	11/19/19	Case #4 Discussion & De-Brief; (Case #4 Due)	
26	11/21/19	Introduction to Data Visualization	
Lab #13	11/22/19	Tableau Demo	
27	11/26/19	Case #5 Tableau Introduction	Watch Tableau videos. See links on Blackboard.
28	11/28/19	Thanksgiving Holiday (No Class)	
Lab #14	11/29/19	Thanksgiving Holiday (No Class)	
29	12/3/19	Tableau Group Work	
30	12/5/19	Course Summary and Final Exam Review; (Case #5 Due)	
Lab #15	12/6/19	Office Hours	
	12/12/19	FINAL EXAM (6:30 PM – 8:30 PM)	

*Subject to confirmation with external speakers.

Please note: The date/time of the Final Exam is determined by the University. For the date and time of the final for this class, consult the USC *Schedule of Classes* at www.usc.edu/soc. Select the corresponding semester to view and click on the "Final Examinations Schedule" link on the left side of the screen.